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a second electrode formed on the photoelectric conversion element in close proximity to the first electrode in such a way that their electric signal does not pass through the second electrode;

an amplifier circuit that has a first input terminal and a second input terminal and that amplifies and then outputs a difference between electric signals fed to the first and second input terminals;

a first bonding wire that connects the first electrode to the first input terminal; and

a second bonding wire having substantially an identical length as the first bonding wire and laid substantially parallel thereto, the second bonding wire that connects the second electrode to the second input terminal

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5. (Once Amended) A photosensor-amplifier device as claimed in claim 1, wherein the photoelectric conversion element includes a photodiode built by joining an N-type semiconductor and a P-type semiconductor together, and the first electrode is connected electrically to one end of the photodiode.

6. (Once Amended) A photosensor-amplifier device as claimed in claim 1, where the photoelectric conversion element includes a photodiode comprised of joining an N-type semiconductor and a P-type semiconductor together a diode comprised of joining an N-type semiconductor and a P-type semiconductor together and shield from light;

the first electrode is connected electrically to one end of the photodiode; and the second electrode is connected to one end of the diode.

7. (Once Amended) A photosensor-amplifier device as claimed in claim 1,  
further comprising:

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a substrate on which a first element formed as the photoelectric conversion  
element and a second element formed as the amplifier circuit are mounted; and  
a first conductor pattern and a second conductor pattern formed on the  
substrate,

wherein the first bonding wire connects the first electrode to the first input  
terminal by way of the first conductor pattern and the second bonding wire connects the  
second electrode to the second input terminal by way of the second conductor pattern.

8. (Once Amended) A photosensor-amplifier device as claimed in claim 7,  
wherein, when the first and second bonding wires are bonded, a first-bonding  
operation is performed on the first and second elements and a second-bonding  
operation is performed on the first and second conductor patterns, respectively.

9. (Once Amended) An infrared communication device incorporating a  
photosensor-amplifier device,  
wherein the photosensor-amplifier device comprises:  
a photoelectric conversion element that converts an optical signal into an electric  
signal;

a first electrode connected electrically to the photoelectric conversion element  
and by which the electric signal is extracted from the photoelectric conversion element;

a second electrode connected physically to the photoelectric conversion element  
and formed in close proximity to the first electrode, an amplifier circuit that has a first

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input terminal and a second input terminal and that amplifies and then outputs a difference between electric signals fed to the first and second input terminals;

a first bonding wire that connects the first electrode to the first input terminal; and  
a second bonding wire having substantially an identical length as the first bonding wire and laid substantially parallel thereto, the second bonding wire that connects the second electrode to the second input terminal.

11. (Once Amended) A photosensor-amplifier device comprising:

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a first chip having a photoelectric conversion element that converts an optical signal into an electric signal;

a first electrode formed on the first chip and connected electrically to the photoelectric conversion element;

a second electrode formed on the first chip so as to be located in close proximity to the first electrode,

a second chip having an amplifier circuit for amplifying and outputting a difference between electric signals fed thereto;

a first input terminal formed on the second chip and connected electrically to one input portion of the amplifier circuit;

a second input terminal formed on the second chip so as to be located in close proximity to the first input terminal and connected electrically to another input portion of the amplifier circuit;

a first bonding wire connecting the first electrode to the first input terminal;

and

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a second bonding wire having substantially an identical length as the first bonding wire and laid substantially parallel thereto, the second bonding wire connecting the second electrode to the second input terminal,

wherein identical bias voltages are applied to the first and second input terminals,

a distance between the first electrode and the first input terminal and a distance between the second electrode and the second input terminal are substantially identical, and a distance between the first and second electrodes and a distance between the first and second input terminals are substantially identical.

12. (Once Amended) A photosensor-amplifier device as claimed in claim 11, wherein the photoelectric conversion element is a photodiode formed, on a semiconductor substrate of one conductivity type, by joining a semiconductor of another conductivity type and coating a top surface with an insulating film;

the first electrode is formed by removing a part of the insulating film so that the first electrode is made contact with the semiconductor of another conductivity type; and

the second electrode is formed on the insulating film and is electrically open.

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14. (Once Amended) A photosensor-amplifier device as claimed in claim 11, further comprising:

a substrate, having a first conductor pattern and a second conductor pattern formed thereon, for mounting the first chip and the second chip thereon,